

In the claims:

Kindly amend the claims as follows:

61. (CURRENTLY AMENDED) A high impact strength, elastic laminate system for enhancing impact resistant properties of a laminate structure, said laminate system comprising:

- a first outer layer;
- a second outer layer;
- at least two inner plies placed between the first and second outer layers;
- at least one dissipating element placed between said inner plies adapted to dissipate and redirect randomly directed local loading applied to at least one of said two outer layers, to tensile loading directed in longitudinal direction (tensile) of said inner plies;
- whereby the said dissipating elements are structures presented in form of expanded mesh made out of various metal, non-metal, natural and non-natural materials and presented in a form of a rigidised or non-rigidised mesh plate, corrugated mesh sheet, mesh in a tubular shape, spherical shape, other geometric shapes, ribbed, textured, and woven mesh (plain, twill or satin weave);

and

- a polymer matrix in between said first and second outer layers, and said first and second inner plies; said polymer matrix arranged to occupy all the volume not taken up by, and in between the said two outer layers, said at least two inner plies, and said at least one dissipating element.

62. (ORIGINAL) The high impact strength, elastic laminate system as set forth in claim 61, wherein additional layers of said first and second plies, said dissipating element, and said polymer matrix are placed between said first and second outer layers.

63. (ORIGINAL) The high impact strength, elastic laminate system as set forth in claim 61, wherein said inner plies are reinforcement plies.

64. (PREVIOUSLY PRESENTED) The high impact strength, elastic laminate system as set forth in claim 63, wherein said reinforcement plies are made from a material selected from the group consisting of E-glass, R-glass, S2-glass, aramids, carbon, single fibre reinforcement, hybrid fibre reinforcement (natural or nonnatural), Quadriaxial, Unidirectional, Double-bias, Biaxial, Triaxial, Plain woven, and Woven rovings.

65. (PREVIOUSLY PRESENTED) The high impact strength, elastic laminate system as set forth in claim 64, wherein said dissipating element has a form selected from the group consisting of expanded metal, ornameash metal, rigidised metal, corrugated sheet, tubular, spherical, aluminum foam, and metallic foam-like structures.

66. (PREVIOUSLY PRESENTED) The high impact strength, elastic laminate system as set forth in claim 65, wherein said dissipating element is made from a material selected from the group consisting of aluminum alloys, steel alloys, zinc alloys, titanium alloys, copper alloys, magnesium alloys, nickel alloys, aluminum alloy matrix composites, thermoplastics, plastics, polymers, foams, and wood.

67. (ORIGINAL) The high impact strength, elastic laminate system as set forth in claim 66, wherein said dissipating ply element comprises of at least two dissipating ply elements, said dissipating ply elements and said reinforcement plies are each arranged in an arrangement selected from the group consisting of unidirectional, cross-ply, symmetric, balanced, quasi-isotropic, and hybrid laminates.

68. (PREVIOUSLY PRESENTED) The high impact strength, elastic laminate system as set forth in claim 67, wherein said polymer matrix is made from a matrix selected from the group consisting of Vinylester, Epoxy, Phenolic, fire retardant, and adhesive.

69. (PREVIOUSLY PRESENTED) The high impact strength, elastic laminate system as set forth in claim 68, wherein said first and second outer layers are made from a material selected from the group consisting of aluminum alloys, steel alloys, zinc alloys, titanium alloys, copper alloys, magnesium alloys, nickel alloys, alloy matrix composites, wood, plastics, paper, thermoplastics, polymers, foams, and paints.

70. (PREVIOUSLY PRESENTED) The high impact strength, elastic laminate system as set forth in claim 69, further comprising at least one additional layer placed on any one of said outer layers, said additional layer being made from a material selected from the group consisting of foams, wood, honeycomb structures, thermoplastics, plastics, polymers, hybrid sandwiches, and paper.

71. (ORIGINAL) The high impact strength, elastic laminate system as set forth in claim 70 wherein said dissipating elements being adapted to create an equilibrium of dissipated loads

in said laminate structure with a component of the outer loading being redistributed in a longitudinal direction to the main axis of said reinforcement plies.

72. (ORIGINAL) The high impact strength, elastic laminate system as set forth in claim 71, wherein said laminate system is adapted to absorb impact energy from about 3770 to about 4000 J, and absorb and redirect forces from about 50 to about 190 kN.

73. (ORIGINAL) The high impact strength, elastic laminate system as set forth in claim 72, wherein said laminate system has a density range from about 1300 to about 2250 kg/m³.

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